



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,655	05/12/2006	Klaus Wolter	102167.57012US	5590
23911 7590 12/24/2009 CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300				
EXAMINER				
O'HARA, BRIAN M				
ART UNIT		PAPER NUMBER		
3644				
MAIL DATE		DELIVERY MODE		
12/24/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/559,655

Applicant(s)

WOLTER, KLAUS

Examiner

Brian M. O'Hara

Art Unit

3644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 46-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 46-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/225)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 46 and 54 along with dependant claims 47-53 and 55-64 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "if necessary" in Claims 46 and 54 renders the claims indefinite because it is unclear if the substance having higher specific density is being included or excluded from the fluid current.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 46-53 and 54-56, 59, 62, 63, and 64 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsai et al. (US Patent 5,592,159 A).** Tsai et al. discloses an apparatus and method (See "in operation" description, Column 3, Lines 12-45) for assisting the landing and/or takeoff of a powered flying object, comprising: at least one, related to a landing and/or a takeoff area, stationary fluid current generator (10), which is designed to provide a fluid current in order to introduce energy into a

flying object (See Column 3, Lines 33-45), wherein the fluid current provided has a certain specific density (density of water).

5. With regard to claims 47-53, Tsai et al. discloses assisting the landing and/or takeoff of a powered flying object, wherein: the direction of the fluid current is adjusted depending on the situation (See Column 2, Lines 45-50); the value of at least one further physical parameter of the fluid current is adjusted depending on the situation comprising at least one of the following parameters: temperature of the fluid current, velocity (See Column 2, Lines 45-50) of the fluid current, homogeneity of the fluid current and laminarity rate of the fluid current; a fire-extinguishing agent (water) is introduced into the fluid current provided; the fluid current provided is a wind generated artificially from the existing atmosphere (atmospheric air is compressed to propel the fluid current); assist the landing of a flying object firstly a fluid current is provided, which is capable of decelerating the flying object, and then a fluid current is provided, which is capable of lowering the flying object from a hovering position onto the landing area (See Column 3, lines 33-39); to assist the takeoff of a flying object firstly a fluid current is provided, which is capable of lifting the flying object from the takeoff area to a hovering position and then a fluid current is provided, which is capable of accelerating the flying object in a desired direction (See Column 3, Lines 40-45).

6. With regard to claims 55, 56, 59, 62, 63, and 64 Tsai et al. discloses the apparatus as described above, wherein; the fluid current provided by the fluid current generator can be adjusted (302); the fluid current generator is designed so as to vary the value of at least one further physical parameter of the fluid current provided (See

Column 2, lines 45-50); a fire extinguishing agent (water); generated from the existing atmosphere (atmospheric air is compressed to propel the fluid current); and adjusting the direction of the flow (See Column 2, lines 45-50).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 57, 58, 60, and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai et al. as applied to claims 54 and 59 above, and further in view of Bertin et al. (US Patent 3,196,822 A).** Tsai et al. discloses an apparatus for assisting the takeoff and/or landing of a flying object as discussed above, but does not disclose a heating element for heating up the fluid current provided or a turbofan. Bertin discloses a heat exchanger (20) for use in heating up a fluid current in conjunction with a turbojet (34). At the time of invention, it would have been obvious to a person of ordinary skill in this art to provide a heating element in the landing/takeoff apparatus as disclosed in Tsai et al. in view of the teaching of Bertin. The motivation for doing so would have been to provide a fluid current that is more suitable for lifting a flying object, similar to a thermal column. Additionally, providing a cooling element for use when the aircraft is landing would also be obvious in view of the heating element of Bertin.

Response to Arguments

9. Applicant's arguments filed 09/10/2009 have been fully considered but they are not persuasive. On Page 7 applicant states that "the Tsai patent neither discloses nor suggests the introduction of a higher-specific-density fluid to increase a deceleration or acceleration effect". This argument is not found to be commensurate with the scope of the claims. The claims do not require enriching of the fluid current by a substance of higher specific density. Enrichment is only claimed as "if necessary". Thus, in the case that it is not necessary, no disclosure needs to be made by the prior art. The fluid current discloses by Tsai et al. therefore meets the claim.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian M. O'Hara whose telephone number is (571)270-

5224. The examiner can normally be reached on Monday thru Friday 10am - 5pm except the first Friday of every Bi-week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael R. Mansen can be reached on (571)272-6608. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael R Mansen/
Supervisory Patent Examiner, Art Unit 3644

/B. M. O./
Examiner, Art Unit 3644